16

Supreme Court of U. S.

HENRY A. BURR

vs.

P. A. DURYEE and others.

ARGUMENT OF E. W. STOUGHTON, ESQ.

MAY IT PLEASE THE COURT:

From the great and confused mass of proofs, and models, and illustrations, and experiments with which this case is overloaded, and, as I think, somewhat encumbered, there are nevertheless certain general, leading, ruling propositions, well supported—indeed hardly controverted—which may be extracted from the record, and upon which we submit that the appellant is entitled to recover in this cause.

I shall begin by stating the propositions upon which we rely, and in the course of what I have to say the Court, I think, will see that they are entirely sustained; and that we indeed submit only those so clearly supported by the evidence that the testimony upon the subject may be said to be all one way.

Connected with and applicable to these propositions of fact are one or two of law by which the rights of the appellant are to be determined.

I first submit, if your Honors please, that prior to the invention of Wells in 1845, hat-bodies were universally

formed by hand throughout the world. With the exception of the partial formation thereof by the machine of Blanchard, they were entirely and universally so formed in this country and in Europe.

The second proposition is, that down to that time no machine is shown to have been constructed, or proven to have been described, capable of forming a hat-body—all attempts in that direction having ended in abandoned experiments.

The third is, that no machine was ever made in this country, or described in any foreign or domestic publication, having any means whatever, of any form, kind, or description for giving direction to the fur, interposed between a fur-throwing apparatus and an exhausted pervious former or cone, and because of the absence of that directing means every attempt to make a machine to form hat-bodies had absolutely failed.

From these several propositions of fact, it follows in judgment of law, that Wells, being the first to organize—the first to construct a machine capable of making hat-bodies—being the first to organize a machine having a deflecting, directing surface interposed between the fur-throwing apparatus and the cone capable of giving direction to the fur in its passage from the former to the latter, is entitled to cover all machines having substantially that mode of operation ; and being the first to construct and organize in a machine a guiding apparatus so interposed, is entitled, upon the authority of this Court, to claim all equivalent means for that purpose.

Again, it is submitted that the original and the re-issued patents being for the same invention — in other words, the description in each being substantially identical — the re-issued patent is valid ; and if the claim be broad enough to cover it is operative to give to Wells an exclusive right to that which he was the first to do, and to give him also such mechanism as performs the same thing by substantially the same mode of operation—not to give to him all means of doing that which his machine does, but all means operating substantially in the same way—that is to say, performing their

operations upon the fur in substantially the same way by throwing, guiding, and receiving it upon the cone, and there holding it for the purpose of being removed in the form of a hat-body.

And, lastly, it is submitted that the appellees having a machine organized by the combination of a fur-throwing mechanism substantially like that described by Wells, with a guiding means interposed between that and the cone, thereby giving to the fur the same general direction as it takes in the machine of Wells, by passing it along and upon a guiding-surface in its passage from the fur-throwing mechanism to the cone, is an infringement of his patent if that is operative to confer upon him the exclusive right to the mechanism, which he was the first to give to mankind.

These are the general propositions upon which we rely. If we establish those of fact, then we submit with entire confidence that in judgment of law the result indicated necessarily follows.

If your Honors please, we have heard a great deal from the other side, we have seen a great deal produced by the other side, criticism upon criticism, sharp and severe, has been made upon the conduct of the parties in this cause, but there is one great ruling fact which I have failed to hear controverted at all, and that is one which I will read from the original specification of Wells. It is a vital truth in this cause, and here I may as well say to this Honorable Court, that in dealing with the questions at the bar, I shall deal with them as though the original specification of Wells were that upon which the rights of the appellants here are to be determined; claiming nothing from any thing contained in the re-issued specification, but looking solely to the original for the purpose of ascertaining what Wells actually invented, and what he was really entitled to claim. That fact to which I have called your Honors' attention, will be found stated on page 98 of the record, where in his original specification he declares:

"It has long been essayed to make hat-bodies by throwing the fibres of fur, wool, etc., by a brush or picker-cylin-

der, into a perforated cone, exhausted by a fan below, to carry and hold the fibres thereon by the currents of air that rush from all directions toward and through the apertures of the cone, and thus form a bat of fibres ready for hardening and felting, but from various causes all these attempts have failed."

The proposition that from various causes all attempts to do this had failed, is one established by the testimony in this cause beyond all question; nor is there one particle of proof to show the contrary. And what does he say had been attempted? It had been attempted by a brush or picker cylinder to throw fur upon an exhausted cone, and thus to make hat bodies; thus giving that credit to Williams, of which the learned counsel on the other side undertook to say Wells had attempted to deprive him.

Wells here put upon record his declaration, that Williams had attempted to organize a machine by means of a picker or cylinder and cone, and the proof shows that exactly these devices he did employ—abandoning them as worthless—there being no pretext that he ever used a guiding or deflecting surface for the purpose of controlling and distributing the fur in its passage from the picker to the cone.

I wish now for a moment to call the attention of the Court to the answers of these appellees. I am now speaking in reference to the machine-patent of Wells, known as Patent No. 1087. It probably is the only patent that I shall trouble the Court about, inasmuch as the time I shall occupy will not permit me to extend my remarks to others. In the answer of the defendants, on page 35 of the Record, will be found that, which if true, and which, if supported by proof, would have shown that machines were in operation capable of making hat-bodies by the union of the three things described by Wells. That allegation is as follows:

"And these defendants, further answering, say that long prior to the said supposed invention of said Wells, the invention of a combination of an endless apron to feed the fur to a picker; a picker to disintegrate the fur and throw it into a trunk or conductor toward a revolving perforated

exhausted cone; a trunk and conductor to receive the fur, and guide and conduct the fur toward the cone as wafted along by the current of air; a cone standing upon its base and over, and its interior communicating with a box exhausted of air by a blower, to cause the fur to be deposited and held upon the cone; devices of several different kinds for controlling the deposit of fur, so as to make the bat thicker or thinner in such parts as required; devices and means for hardening the bat while on the cone on which it was formed, to give it sufficient consistency to remove it therefrom, were all well known and in public and successful use; and among others, the same were known to and used by William Fosket, now of Meriden, Connecticut, and Benjamin L. Steadman, of the town of Meriden, Connecticut, at Ware, and other places in its vicinity, and at Boston, in the State of Massachusetts."

Fosket is alive; his patent has been introduced in evidence in this cause; and yet throughout this Record we find no witness called to prove that a hat-body was ever made upon the Fosket machine; no witness called to prove that a hat-body was ever made upon either of the machines invoked for the purpose of proving what they call the state of the art to limit the claims of Wells, but, on the contrary, as I shall submit to your Honors, we have testimony abundant to show, that the only means upon earth by which hat-bodies were at that period made, or could be made, were by hand, with the exception of the effort made by Blanchard, which was the first practical step toward introducing machinery for that purpose.

We have also set up in this answer, for the purpose of showing the state of the art of making hat-bodies by machinery at the date of the Wells invention, the patent of Williams, granted in England, in 1833—thirty years ago—and up to this time upon that machine two hat-bodies, worth less than the fur of which they are made, so the witnesses testify, and two hat-bodies only, have been made. And bearing upon this, it is in proof that as late as 1859, one third of the Wells English patent, then having but about two years to run, was sold in England to the largest hat-

forming establishment in Great Britain for $10,000, and in addition, a royalty of one penny upon each hat-body made, if they used more than two machines; and yet that was the home of Williams. In that country was recorded what he did; and as your Honors will see, when I come to refer to the testimony invoked by the other side, and without which it would have been improper to refer to it, Williams not only failed to describe any method of making hat-bodies, but finally, having made an effort to construct a machine with a guiding apparatus, he utterly failed, and abandoned it as hopeless; and thus ended all that he did in that direction. These are facts which I shall verify, and which I state with entire consciousness of the responsibility upon me.

We also have set up the patent to William Angus Robertson granted in 1838, and another to Ponsford in 1839, worthless things—twenty-five or thirty years old—never used to this hour—and then we have *Miller*, and at last Fosket; and of all this array, where are they? Cobwebbed, valueless, condemned, worthless. They occupy the position, so emphatically and tersely stated by his Honor Mr. Justice Grier, when characterizing efforts to overturn a patent in controversy before him by similar means, and I will here read the observation of that learned judge from a somewhat celebrated opinion delivered by him in the case of Goodyear *vs.* Day:

"The question now under consideration is, therefore, whether any other person had succeeded in discovering and perfecting the peculiar process or manufacture claimed in the patent of 1844 and 1849, before Charles Goodyear? Was "vulcanized India-rubber," as now known in the arts, known, and the process of manufacturing it perfected, before Charles Goodyear made known his discovery, and perfected it by experiment?

"The testimony shows that many persons had made experiments—that they had used sulphur, lead, and heat, before Goodyear's patents, and, probably, before his discovery. But to what purpose? Their experiments ended in discovering nothing, except, perhaps, that they

had ruined themselves. The great difference between them and Goodyear is that he persisted in his experiments, and finally succeeded in perfecting a valuable discovery, and they failed. It is usually the case, when any valuable discovery is made, or any new machine of great utility has been invented, that the attention of the public has been turned to that subject previously; and that many persons have been making researches and experiments. Philosophers and mechanicians may have in some measure anticipated, in their speculation, the possibility or probability of such discovery or invention; many experiments may have been unsuccessfully tried, coming very near, yet falling short of the desired result. They have produced nothing beneficial. The invention, when perfected, may truly be said to be the culminating point of many experiments, not only by the inventor, but by many others. He may have profited indirectly by the successful experiments and failures of others; but it gives them no right to claim a share of the honor or the profit of the successful inventor. It is when speculation has been reduced to practice, when experiment has resulted in discovery, and when that discovery has been perfected by patient and continued experiments—when some new compound, art, manufacture, or machine, has been produced, which is useful to the public, that the party making it becomes a public benefactor, and entitled to a patent."

And indeed it may be said here, that generally experiments—abandoned experiments—efforts in the direction to which the mind of the subsequent inventor is tending, discourage rather than encourage, by showing that others have tried to do the same thing, and have failed again and again. The law indeed regards as inventor him only who has reduced his machinery to practical and to successful use; ignoring the person entirely who has made experiments, however ingenious, falling short of practical results—giving to him who has perfected the invention an exclusive right to it, although he may have used the experiments and been indirectly benefited by the ingenuity of others, and how aptly do these observations of the learned judge apply to

the case at bar if the propositions I have heretofore stated be true! And here I appeal to your Honors, if you have heard a single word from the counsel on the other side to the effect that up to this hour, any of these old machines have succeeded in making a hat-body? His Honor Judge Grier further remarks:

"And yet when genius and patient perseverance have at length succeeded, in spite of sneers and scoffs, in perfecting some valuable invention or discovery, how seldom is it followed by reward! Envy robs him of the honor, while speculators, swindlers, and pirates, rob him of the profits. Every unsuccessful experimenter who did, or did not, come very near making the discovery, now claims it."

Williams, Robertson, Ponsford, Miller, Fosket — all appear here—some from the grave, and some alive — not for themselves, but by this self-constituted proxy—the pirate who takes a machine which is valuable, and appropriates under a different form the spirit and the active operation of that which Wells was the first to do. And here it may not be unprofitable to call your Honor's attention to what was said by Mr. Justice Story in a case where it was alleged and proven by some witnesses, that twenty or thirty years before, there had been described the same planing machinery which was afterward patented in this country by Woodworth. That eminent judge remarked:

"Upon this point, the counsel for the plaintiff made a suggestion toward the close of his argument, which struck the Court as possessing great force. Bentham's specification was known as early as 1793, while Woodworth's patent was not taken out until 1828. It is universally admitted that the planing machine is a most valuable invention; but in the scientific works of the day, no planing machine like Woodworth's was ever alluded to, until after his patent was taken out, though Bentham's specification was constantly spoken of, and the planing machine he patented in 1791, known and described. Now, with so many ingenious and inquiring minds constantly at work upon the construction and improvement of machinery, both in Great Britain and America, all having easy access to well-known

publications relating to science and the arts, how could it have been, that down to the year 1828, no man should ever construct this machine from Bentham's specification of 1793, if it be so clearly found therein? This seems to to me be a fact of great importance, though I have no right to say how far it ought to affect your minds."

Indeed, courts have always, in dealing with these questions, regarded the fact that the thing described or set up as anterior to the patented invention was never introduced into use, as evidence that it was worthless, or an abandoned experiment — declining to give it any force, either for the purpose of limiting the claim of the subsequent practical inventor, or of overturning his grant.

Now, may it please your Honors, what has been done by the counsel on the other side? We have had an array of models and illustrations, and great labor expended for the purpose of showing that the central figure among these former inventors—Williams—had proposed and described, substantially what Wells did. That certainly is the impression intended to be conveyed. If your Honors' recollect what my learned brother, Mr. Keller, said in his opening argument, it will be remembered that he particularly pointed out all that Williams had done, all that Robertson had done, all that Ponsford had done, and all that Fosket had done; and he left these men exactly where the learned counsel left them. And where did Wells begin? He began at that state of the art which these men left; and this is a fact not controverted; and if there be a machine described, or if there has been one in use containing the organization substantially of the Wells machine, or capable of making a hat-body, I should be glad to have the proof of it pointed out upon this record. If there be a machine described, if there has been one made, having any means interposed between the fur-throwing apparatus and the cone, for the purpose of guiding and giving direction to the fur, I desire that pr. of of it be referred to. I have not yet heard it suggested; it does not exist.

Now let us go a step further. We all know the character of our people. We all know their ingenuity and their

aptitude in taking what they are entitled to, and of some of them in taking what they are not entitled to. But we know very well that they are ingenious, and that wherever machinery is to be employed, they get the best. In 1836, Mr. Condit, one of the largest hat manufacturers in this country—then making hat-bodies entirely by hand—knowing of no machinery capable of making them, purchased a right to use the Blanchard machine. That machine made a continuous bat, and this after being so made, was wound upon the cone by hand. He paid twenty thousand dollars for the right to use that machine. It was not adopted by the trade, and one of the appellees in this case declined to use hat-bodies so formed, upon the ground that they were not well made. In 1845, when Wells' invention was reduced to practice, Mr. Condit, as the testimony shows, at a sacrifice of from sixty thousand to seventy thousand dollars, threw away the Blanchard machinery, and adopted the Wells machine—not the Wells machine with the Burr and Taylor improvement, but the Wells machine, pure and simple. Here was a sagacious man, well acquainted with the business he was engaged in, throwing away machinery, and adopting the Wells machine, which the learned counsel on the other side tells us was a worthless and impracticable machine until two years after—throwing away in the effort to get that which was better — the Blanchard machine and sixty thousand or seventy thousand dollars with it.

For the first time, then, in this country, or anywhere else, hat-bodies were made by machinery, and instead of that being a failure, if your Honors will be kind enough to turn to pages 378, 379, and 380 of the Record, you will find to the contrary proof which has been appealed to by the other side, and parts of which have been read. That proof consists in the application of Burr and Taylor for an extension of the patent for the Burr and Taylor improvement. Your Honors will bear in mind that A. B. Taylor, one of the patentees, was not interested in the Wells invention, but that he and Burr were striving to get their patent for improvements extended, and therefore were not likely

to give to Wells a credit to which he was not entitled; but they say at the bottom of page 378 of the Record:

"That invention" (Wells') "called for an entire change in the art of manufacturing fur hat-bodies, and in that, as in all inventions intended to induce a radical change in any branch of the useful arts, innumerable difficulties were experienced in the introduction of it into public use, not only from the opposition of the trade to the introduction of this new system, but from the practical working of the machine, incident to the introduction into practice of a new invention."

Then, if we look at the last paragraph on page 379, where they are speaking of what they strove to do in the way of improving this machine, they say:

"The thing to be accomplished was, in retaining the general mode of operation of the Wells invention, so to improve it that it could be readily set to form bats of any desired varying thickness from brim to tip, without requiring a skilful operator to work it, and which, when set to any desired variation in thickness, would make any number of bats all alike."

And at the bottom of page 380 they say:

"We are enabled to say, after long experience in the working of the Wells machine, with and without this our said improvement, that one fourth of the saving, which has been effected by the Wells method in the manufacture of hat-bodies, has been due to this improvement."

Your Honors will observe that these men were striving to extend their patent; they were striving to show the value of it; and yet Taylor, who had no interest in the Wells invention, admits that but one fourth of the value of the Wells invention, as improved, was due to the Burr & Taylor improvement; and then they proceed to show what had been practically done by the Wells invention before the Burr & Taylor improvement was added. I now read from the next following paragraph:

"The Wells machines were first started for the business of manufacturing hat-bodies about the early part of the year 1845, and from that time to the first of January, 1846,

forty-seven thousand two hundred and thirty hat-bodies were manufactured, and from the first of January, 1846, to the first of January, 1847, the time of the introduction of our said improvement, one hundred and seven thousand two hundred and twenty-two hat-bodies were manufactured."

Over one hundred and fifty thousand hat-bodies manufactured by this new machine prior to the introduction of any improvement at all, notwithstanding which the learned counsel repeated over and over again that it was inoperative and not a valuable machine, until this improvement was added to it; and yet he, for another purpose, appealed to the statement from which I now read as testimony that could not be controverted, and from this we learn that in less than two years over one hundred and fifty thousand hat-bodies were put into use against the prejudices of the trade incident to the adoption of a new means of manufacture. And finally, when the improvement was added to it, what followed? Bear in mind, if your Honors please, that one fourth only of the value of it was due to the improvement of Burr & Taylor. In the same document thus appealed to by the other side as evidence not to be doubted, we have on page 383 of the Record this statement:

"The number of hat-bodies made on the Wells method, including our said improvement, from the first of January, 1847, when it was first applied, to the present time, is not less than forty-three million seven hundred and eighty-eight thousand seven hundred and nineteen. The price for which hat-bodies have been and are now manufactured for the trade by those who work on the plan of Wells' patent, with our improvement, is, on an average, twenty-nine cents per hat-body less than the price for which they were then or can now be made by hand, so that the actual saving to the public by Wells' method, in connection with our said improvement, has been not less than twelve million six hundred and ninety-eight thousand seven hundred and twenty-eight dollars, making the saving due to our said invention not less than three million one hundred and seventy-four

thousand six hundred and eighty-two dollars, during a little less than fourteen years."

And yet we are told that this invention of Wells — and this was put in as testimony by the other side—proven to have been of the value of over nine millions of dollars to the public, was a thing of no consequence—to be ignored by a court of justice—treated as though it was some trivial and contemptible thing unworthy of a place in the arts or in the history of the manufactures of the country. The truth is, it is such men as Wells and McCormick and others who fill workshops and cover farms with mechanical men, if I may use the expression, whilst the living men, their places thus supplied, are able to be elsewhere, in the field, fighting for our flag, our products suffering no loss, but rather a practical gain by the change.

This, if your Honors please, is the invention now before the Court, and this is its practical character and value.

It should not surprise us to learn that cupidity and avarice have stimulated pirates to seize upon it, nor will your Honors be surprised to know that efforts have been made to hold that which Wells was the first to give, and which the law of the land promises to secure to him, and to those who stand in his place; and all we ask here, claiming for them, is, that this Court will ascertain what Wells did, what he created, and then, disregarding all forms, treating words as things, give him exactly that which he gave to us, no more, no less. Do not turn him off with a patent for a mere form; do not turn him away by a defence like that which was sought to be made available against the patent for Watts' Engine, which the English judge said the infringer had changed by putting the head of the engine where the foot should be, and the foot where the head should be, undertaking by that disguise to take the invention. Do not declare our grant to be for the mere form of a trunk, into the concave of which the fur is thrown by the picker or brush turning in one direction, and permit the pirate to use the invention without the form by reversing the picker as in the appellee's machine, whereby the fur is made to take the same direction by being thrown upon a convex form,

the reversed motion of the picker producing the same mode of operation as in the Wells machine, by means differing from those there employed in form only. Such a disguise constitutes one of those wretched devices and evasions which, unless this invention be so contemptible that it is only capable of developing itself in one form, is covered by the patent. If not, the patent is worthless.

I have said that in this country no machines for making hat-bodies prior to the invention of Wells were used; I have said also that none were used abroad. In 1851, this machine was sent to France, and the witness who went there testified—and no proof to controvert it is in the record—that no machine was then used there for that purpose. The Wells machine was there introduced in 1851. In 1850 or 1851, an effort was made to introduce it into England, where in the largest establishments hat-bodies were made by hand only. Proof of this is in the record and not controverted; but I have not time to read it, although I have references to it upon my brief. The Christys, the largest hat-making establishment in Great Britain, at first declined to adopt the invention, but finally in 1859 they purchased it at the price I have named, and thus it was introduced there—not the Burr and Taylor machine, but the Wells invention, with the Burr and Taylor improvement engrafted on it. Is there any thing better settled in the law of patents than that if I make an improvement, or construct a machine, however imperfect it may be—yet bearing its principle and capable of doing its work by its mode of organization—the man who improves upon that, however much he may improve, cannot take what is mine, and use it because he has engrafted upon it something which makes it more valuable? Nothing is better settled than that, if your Honors please.

Before proceeding briefly to consider by what organization Wells was able to effect this great change, and to give to the world this very valuable machine, I must for a few moments turn my attention to that which I find stated with deliberation in the printed argument furnished by the counsel for the other side. I find in that statements of the most

extraordinary character, containing references to the Record so directed, and statements therefrom so extracted, as to be well calculated to mislead unless some notice be taken of them; and whilst I should not trouble the Court upon this subject if the same peculiarities had distinguished an oral argument, yet as your Honors will have the printed one before you, I take the liberty of noticing a few of its charges, and of correcting—to say the least of them—a few of its mistakes bearing somewhat upon the questions at issue.

I will first call your Honors' attention to what undoubtedly created some—I will not say prejudice, because that could find no place here—but some impression upon the Court; and that charge was this. It was said by the learned counsel—it was reiterated again and again—it is printed in his argument—that we tried false experiments with a Williams machine to establish that it would not work; that Mr. H. B. Renwick participated in trying the experiments; that he, if any one could be found who would contrive not to make it work, was the man not to make it work; and then it is said, that we withheld the machine which he used, (although the counsel tried to get us to produce it,) for the purpose, the inference is, of preventing him from being able to cross-examine the witnesses, so as to expose the fraud; that he finally did expose it, and that it turned out that if the machine had been constructed as Judge Kane said in his charge the Williams machines should be, even Renwick himself admitted it would work. That is about the charge made against the witness, and the counsel who conducted the examination, and who declined, it is said, to produce the machine. That bears upon the case, because if your Honors should be satisfied that a fraudulent experiment had been tried, that means were taken by us to prevent the exposure of that fraud, and that the other side had the authority of Judge Kane for saying that, if the machine had been constructed as Williams intended it should be, it would work, it might well produce an impression against us. On page 23 of the learned counsel's argument, I find this statement:

"In the English drawing of Williams' machine, there is shown a thin deflector in front of the fan, and the aim of the plaintiff has been, in this suit, after making that jury trial the basis of this chancery proceeding," [it is the first time I ever heard of such a basis,] "to endeavor to overcome and negative the effect of that portion of Judge Kane's charge in connection with what is shown on the English drawing. Hence, they employed the expert Renwick, (the same who prepared claims for Re-issue 1087,) to try *what he called* a Williams machine.

He did so, aided by Mr. Burr's foreman, in the presence of several of Mr. Burr's friends, who testified that it made the bats heavy at the tip and too light at the brim.

If the plaintiff had determined that the machine should fail, no man understood better than Mr. Renwick "how not to do it."

And from the deep interest he has taken for plaintiff, it is possible that he might have had the disposition "not to do it."

2. Plaintiff produced neither the machine he tried, nor any model of it, to enable defendant's counsel, or this Court, to see and judge precisely what was the machine Renwick tried.

3. At the close of Mr. Renwick's testimony in chief about this and other machines, and before cross-examining the witness, the following request was made by me, which will be found on page 417 of Record:

"Mr. Harding requests permission to examine the machines in operation on which the experiments testified by Mr. Renwick were tried, in order to enable him to cross-examine him properly as to the construction of those machines; or Mr. Harding requests the production of the machines before the examiner at his expense."

Counsel for complainant replies that, he has sent for the trunk and cones used this morning to be immediately brought here, and that he shall make them exhibits in this case, and that he will have the machines here as soon as they can be got here.

Your Honors will be kind enough to note the words

"trunk and cones." Of course there was no trunk in the Williams machine. Your Honors will get the explanation of this very soon; I am sorry to be obliged to make it. I continue the quotation from the learned counsel's printed argument:

"To this civil request for permission to examine the machines in operation, the plaintiff's counsel did not even deign to reply. To the request to produce the machines before the examiner at my expense, the counsel for complainant replied that he would bring the machines there before the examiner as soon as they could be got there.

"The pretended Williams machines never did come; and to this hour the plaintiff's promise as to those machines has not been kept.

4. Being thus refused inspection of the machine in operation, and its promised production being withheld, I was compelled to cross-examine the witness absolutely in the dark. By mere accident I stumbled on the vital point, that Mr. Renwick, in order to enable himself to swear that his experimental machine was like the English drawing of Williams, put a thin tin deflector in front, as in the drawing; but, *without any authority in the drawing or patent, he fastened that deflector up to strips of wood* on its back."

Then if your Honors will look to page 25 of the printed argument, immediately under the testimony there quoted, the learned counsel says:

"Had that 'deflector' been bent up and down, as Judge Kane charged was the case in the Williams machine, Renwick admits that it *would have varied the deposit of fur*."

If your Honors please, I know of nothing more disreputable than the conduct here charged on the witness and charged on the counsel. It need not be disguised. It is a charge in substance that the witness was guilty of two things: first, of purposely misrepresenting the Williams machine in the practical one he made; and second, that the counsel, to aid the witness, so that his falsehood, that it was like the Williams machine, could not be exposed, kept the machine out of the way. That is the English of this. We all know it. The purpose was to convince your Hon-

ors of this, and then the purpose further was to convince your Honors by that reference to Judge Kane's charge, that he had charged that the Williams machine had a deflector, and a deflector of such a kind that Renwick was obliged to admit that, if it had been used, it would have answered the purpose. I shall dispose of this now and here where the charges are made. Bear in mind that the fraud is alleged to consist in having put a thin tin deflector, as shown in the Williams English drawing, and in so sustaining it that it would maintain its shape whilst being operated. Now, to a person acquainted with this testimony, and with the issues presented to this Honorable Court, it will be seen that this pretended fraud consisted in making a deflector of the form shown in the Williams drawing, as it is said, and in holding it in place exactly in the form there described. If there had not been a charge of fraud bottomed upon this, the ordinary mind would have said, "That is exactly what an honest man making the machine should have done." Now, I call your Honors' attention for a moment to the testimony of Renwick who is thus arraigned, and you will see what he did. It is to be found on pages 413 and 414 of the Record. The witness says on page 413, in answer to question 12:

"A. I was present at efforts to form hat-bodies on a machine which I have heard called an English machine. The machine was what I call a Williams machine, and was constructed in substantial accordance with the drawing on figure 2, sheet 2, of Williams' patent of February 14, 1833, No. 6387, and the description thereof in the said patent.

"Q. 13. State how that machine corresponded with figure 6, marked 'cancelled' in Exhibit No. 5?

"A. It is substantially the same with that figure, except that the machines I saw experimented with has a curved piece of metal in front of the fan, which is shown in the English specification, and is not shown in the cancelled drawing."

Bear in mind that Williams, in his English specification of 1833, shows a delicate line, which the other side have tried to torture into a deflector. Of course it is not shown

in any such form as could possibly guide the fur. That is conceded; but when Williams in this country made his application, and filed his drawing for the purpose of getting a patent for machinery to make hat-bodies, that line was not shown; and it is also conceded that neither in the English specification nor in the American is one single syllable said about a deflector or guiding surface of any kind; but all that is said is that he takes a carding engine, puts an exhausted cone in front of it, and throws the fur upon that. Mr. Renwick, however, that there could be no criticism upon his experiment, made a tin deflector of the form shown in the Williams drawing. I now exhibit it to your Honors. Here is that delicate line, [pointing to it,] not one word being said about it in the specification; and your Honors will see that it is curved up in such a way that it could not possibly operate to direct or guide the fur at all. It is that thin tin piece which Mr. Renwick put in, in order that there might be no complaint that he did not exactly follow the English drawing. In another drawing of the same machine that line is there, [pointing to it,] and the fur which is shown as discharged from the machine appears to be over the top of the so-called deflector, and hence our witnesses do not think—and it is obvious—that this piece could have extended across the machine, for if it had, the fur could not have been thrown upon the top of but under it. Mr. Renwick made a piece of tin like that which I now hold in my hand, and put it entirely across the front of the machine; and to prevent it from getting bent up or down, and keep it exactly in the place prescribed by the drawing, he put on pieces of wood which held it in place.

The learned counsel on the other side seemed to have made the burden of his argument, when examined, something like this—I hope he will pardon me for giving such a childish appearance to it; but this is it: "We made," he says, "a deflector; we made it in the form prescribed by the drawing; it was made of thin metal, and hence we used means to hold it in position exactly as shown by the drawing; therefore we committed a fraud, because we did not give it an opportunity to bend and skew about, and peradven-

ture get into the form of a conductor of the fur!" That seems to be about the argument. I have always supposed when a patent was set up as antedating an invention, that the specification and drawing of it was to be followed in ascertaining what invention it described, and that we were not to speculate as to whether some accidental change might not be made by some bungling person who should undertake to work the machine described, and in that way fall into the error of doing something the patentee did not intend to do."

But I am going a little further with this. Mr. Renwick goes on to state in his direct examination, that having so made and supported that piece of curved metal, they tried the machine, and the fur was thrown all over the room. Two bats only were made, and they were pronounced worthless. Then we called other witnesses—I will not take the time of the Court to read their evidence—Comstock, Nichols, and Bodwell—and they state that the two bats made were perfectly worthless—thick where they should have been thin, and thin where they should have been thick, and that they were worth less than the fur before it was thrown into that form.

Of course such a machine comes within the range of abandoned experiments well known in the law. Now the charge is, that if these pieces of wood had not been put there to stiffen the tin and hold it in place, it might have got bent, says the learned counsel, into the position where Judge Kane charges that the deflector of the Williams machine was.

And then the learned counsel on page 23 has given a part of the charge of Judge Kane in a trial had before him in Philadelphia, where the learned judge is commenting upon the testimony of some witnesses who had come from England, and who undertook to show that as a fact Williams got up a machine—not the machine described in his drawing—but tried to get up one with something to direct the fur interposed between the fur-throwing apparatus and the cone, and the learned counsel has given that extract and that only. This put us to the trouble of sending to New-

York for copies of that case and the entire charge. They are in court, and I shall read from the charge for the purpose of showing that Judge Kane told the jury, *first*, that there was nothing in the Williams drawing which showed that he intended his machine to operate at all upon the same principle with Wells's; and, *second*, that he further told them that the machine which the English witnesses swore was most like Wells's was an abandoned and worthless experiment, and by Williams condemned as such; and here, with your Honors' permission, I will hand up copies of the full charge. Then we shall see what becomes of this effort to invoke Judge Kane for the purpose of making it appear that the Williams machine was a practical machine, and had a deflector that would work.

I call your Honors' attention, first, to the fact that on page 74 of the report of that trial, beginning at the last paragraph, the extract on the gentleman's brief will be found. I will not read that; but I will read what follows, and then call your Honors' attention to this. The extract ends near the bottom of the page with the words, "Wells's machine had," just before the close of the last paragraph on page 75. Now, by looking at this extract your Honors will find that Judge Kane there refers to the testimony of these witnesses of what Williams was attempting to do when they worked with him. He was attempting to make a machine having a trunk, or something approaching to a trunk, not anywhere described in his drawing, not anywhere described in his specification. At the bottom of page 75 Judge Kane tells the jury:

"As I said to you before, it is always better to get hold of something, if you can, written or printed, in regard to which memory could play no tricks."

He has been talking about these witnesses, and what they had sworn to as done by Williams. What was *done* by him was utterly inconsequential, because a foreign machine may be ever so perfect and exactly like a machine patented here, and yet if it has not been described in a printed publication, it has no effect on the patent granted here. The learned Judge goes on to say, (page 76:)

"Williams patented his machine, and the witness for the defence described machine No. 3 as the same which is found described in the journal of the Franklin Institute, where Williams's patent is set out. Look at that machine of Williams's! Is it not perfectly apparent that this drawing was never intended to represent a machine acting upon the principles of the Wells machine? I think it would be a difficult question to propound to a mechanic, in what particular or in what shade of principle it was analagous to Wells's machine. It resembles the Blanchard machine in principle, without being identical; but it seems to me—I speak under correction, and with great deference to your judgment in the matter—to assume as the principle upon which it is to act something entirely alien to any thing in the mind of Wells. An important particular of Wells's machine, that which must have struck each of you as characteristic of it, was this chamber, which carried along the fur from the revolving brush, out of a narrow vertical opening upon the cone. I think if there is any one characteristic which is obvious, it is the drawing we have of Williams's machine shows that he contemplated no such thing."

And then the learned judge proceeds:

"But this is not all. Mr. Williams came here and took out his patent, or applied for a patent, and at that time made another drawing of what he regarded as his hat machine. To this accidental circumstance, we owe a still later record of what he thought he had invented, and the remarks which I have made as to his first invention, apply with equal force to his invention as detailed upon the drawing from the Patent Office, and deposition accompanying it."

Mr. HARDING.—Mr. Stoughton, if there is no objection, I should thank you to finish the sentence you were reading just now.

Mr. STOUGHTON.—I have but little time, but I will do any thing you desire.

Mr. HARDING.—There are three lines you omitted in your reading.

Mr. STOUGHTON.—Read them, if you please.

Mr. HARDING.—These are they :

"I think if there is any one characteristic which is obvious, it is that the drawing we have of Williams's machine shows that he contemplated no such thing; instead of having a vertical opening, a narrow slit, to which the fibres were driven by a force behind, and invited by a force in front, until they should escape upon the revolving former or cone, his opening was horizontal, and there was no chamber or case between the blower, brush, or picker, and the outlet for the fur upon the cone."

Mr. STOUGHTON.—I have said that the American application for a patent contained no such line as that shown in the English drawing of Williams's machine; so that in 1840, seven years after getting out his patent of 1833, he comes here and shows conclusively that he had no idea of interposing any means for the purpose of directing the fur after it should leave his picker, for he describes none in his American application for a patent; he develops none in his American drawing; but the drawing is utterly bare, showing a carding-machine with a cone in front, and nothing else. The line in the English patent undoubtedly indicated something besides a deflector, for it is not in his American application.

I hardly need say to this Court, that if Williams, whose machine, as your Honors will see, when I come to read a little further in this charge, had utterly failed because it contained no directing apparatus, had known of any, he would have described it in his American specification. As to the effort of Williams to devise and construct such means, Judge Kane, on page 76, proceeds to say :

"So much as to No. 3. The other machine which Williams invented, and which Mr. Osburn seemed to me to think was the invention most closely analagous to that of Mr. Wells, and, as he said, the same in principle, never was perfected. I speak not of disputed facts, but of facts conceded; it was a machine built for the purpose of experimenting; it was worked upon and altered, and some twenty hat-bodies were in the course of one, three, or five months, made on it. I say one, three, or five, because the witnesses

could not speak definitely upon it, and they sometimes said six weeks, and sometimes five months, as we all would, testifying of a thing so long ago which did not make a definite impression.

"But they concur in stating that after making these twenty hat-bodies, it was found that the machine would not work; it would not pay for the trouble and time, and it was abandoned."

That was the Williams machine, as he attempted to reduce it to practice. He is the inventor who was referred to by the counsel yesterday as the man whose merits we sought to underrate. It was said that he had constructed very ingenious things; that he had made a hat-forming machine, but it turns out that he, too, comes exactly within the range of the observations made by his Honor Mr. Justice Grier in another case; he had experimented, and experimented ingeniously, but he had utterly failed to do any thing practical, and what he had done practically and in the eye of the law, was worthlsss.

Judge Kane continues:

"Now, let us suppose the machine No. 4 was identical in principle and in structure to the minutest hair, with the machine of Wells; having been abandoned—having been merely the result of experiment—itself an experiment, and abandoned as useless, the invention afterward honestly made by another person, made practically useful, and as such made known to the world, would be entitled to a patent, and his patent would not be affected at all by the prior invention of the machine which had been abandoned after experiment.

"We are constantly meeting, on the trial of patent cases, with machines sometimes identical in principles, sometimes identical in form, with other machines of the highest known utility, which yet have been abandoned as useless; and witnesses coming upon the stand, perfectly honest witnesses, and books are brought, giving perfectly honest records of machines as they existed before. The wit of man is puzzled and confounded in an effort to distinguish them.

Yet one has been abandoned as useless, and the other has been so useful as to effect a revolution in the arts."

Where, then, does Wells stand? In 1845 he, by a single stride, effected a revolution in the arts. Where is Williams, and where is Ponsford, and where is Robertson? No hat-body was ever made upon either of their machines, and the last we hear of Williams is his effort to make a practical machine by the introduction of a deflecting and directing surface, interposed between the picker and the cone. He utterly failed to do this. In practice his machine was worthless, and he abandoned it as such.

Now, if your Honors please, what becomes of the alleged "fraud" of Mr. Renwick? What becomes of the charge made in this printed argument? And what becomes of the suggestion that Mr. Justice Kane had said that Williams constructed or described a machine with a deflector so bent that Renwick was forced to admit it would operate? But I must go a little further. Not only was this request of the counsel—said in the printed argument to have been for the production of the Williams machine—not made for the production of that, but my brother Gifford in his answer to the request for the production of machines, said: "The cones and trunk shall be produced." He evidently referred—not to the Williams machine, but to other machines and parts of machines which had been experimented with on that day; and the cones and trunk which he thus promised to produce were produced, as appears upon the record, and the gentleman had them to cross-examine upon. Then my brother Gifford had an understanding with the defendants' counsel that the working machine being large and cumbrous, need not be produced.

Now I will call your Honors' attention for a moment to the testimony upon this subject. On looking at pages 416 and 417 of the Record, the Court will see that on Friday, September 27th, 1861, when this call for the production of machines was made, two machines had been experimented with. I read from Mr. Renwick's examination, on page 416:

"Q. 32. Have you been present at the formation of hat-bodies this morning, where were also present Andrew Comstock, H. O. Pierce, and Samuel G. Starr; if yea, where was it?

"A. I was present. It was at Mr. Burr's factory in this city.

"Q. 33. Did you see them formed on machine without a hood over the delivery aperture of the trunk, and without the Burr & Taylor improvements, and if yea, on how many of such machines?

"A. I saw them formed on one machine without a hood and without any Burr and Taylor improvements, and on another machine which had cloth-covered rollers, and a trunk with flexible sides and movable top, and no hood."

Then the question is put, "You say one of the machines that you saw operated this morning without a hood had cloth-covered rollers, and a trunk with flexible sides and a movable top," and he says no. Then on that same day when the defendants' counsel came to cross-examine, we find this:

"Mr. Harding requests permission to examine the machines in operation on which the experiments testified by Mr. Renwick were tried, in order to enable him to cross-examine him properly as to the construction of those machines, or Mr. Harding requests the production of the machines before the examiner, at his expense."

What was my brother Gifford's reply to that?—understanding of course that Mr. Harding alluded to the machines which had been experimented with on that day, for the experiment with the Williams machine was the day before, and that had no trunk.

"Counsel for complainant replies, that he has sent for the trunk and cones used this morning to be immediately brought here, and that he shall make them exhibits in this case, and that he will have the machines here as soon as they can be got here."

On page 425 and 426 your Honors will find this entry, showing that the trunk and cones were, as promised on that day, produced before the examiner.

"The trunks and cones, with which the witness experimented, as stated in his examination in chief, having been brought to the Examiner's office, counsel for complainant puts them in evidence as exhibits, and they are marked Exhibit J, Exhibit K, Exhibit L, and Exhibit M."

And then the machines themselves being unimportant, it was understood by my brother Gifford and Mr. Harding that they need not be produced, and they were not. Your Honors will observe that if Mr. Harding had intended to call for the production of the Williams machine, when my brother Gifford answered by saying he would produce the cones and the trunk of the machines used that morning, he should have said to him, understanding what was in my brother Gifford's mind, "I require the production of the Williams machine;" but from that time onward through this examination we hear no question put, "Why is not the Williams' machine produced;" no further suggestion was made about it; it was left to that understanding between counsel, which commonly rules such matters.

Mr. Harding.—I remember no such understanding, sir.

Mr. Stoughton.—The learned counsel said it was not produced in pursuance of the request. I can only say, upon the assurance of my brother Gifford, that it was the understanding that the working machines need not be produced.

Mr. Harding.—The call was for all the machines alluded to, and the Williams machine was as much alluded to as any other, but I was permitted to see none of them.

Mr. Stoughton.—I have made the exposure and explanation I intended to, and I have also taken this occasion to call the attention of the Court to the charge of Judge Kane in full. I think that hereafter it will hardly be said — as was said by the learned counsel in his argument—that Mr. Williams was an inventor of such genius that the little thing of a director interposed to direct the fur was too trifling to trouble him; that he knew all about it, but did not see fit to describe it. It now appears that he undertook to make it, that in this attempt he utterly failed, and when the Court considers that these efforts to make fur

hat-bodies by the use of a revolving fur-throwing apparatus and an exhausted cone commenced as early as 1833, and failed to produce any thing down to the time Wells appeared, the Court, I think, will apprehend, as a practical question, how exceedingly difficult it was to accomplish that end. Indeed, I think that the idea of devising practical means of shaping and directing a shower of fur thrown from a revolving picker would be quite an unlikely and remarkable conception of the mind.

The material to be operated upon is light and very difficult to control. But when the plan of accomplishing this was once well conceived and executed, changes of form retaining the mode of operation would be easy. The surface upon and along which the fur is to be thrown gives it figure, and shape, and direction—the part of the surface nearest the cone determining in what relative proportions it shall be made to lodge there. Now suppose, for illustration, the copper model I hold in my hand to be a trunk, and suppose the fur to be thrown along underneath its surface, as it is thus thrown up into the concave, it finally takes the form of the opening nearest the cone. If this is very near the cone, of course the sides of the concave will influence the direction, and when it leaves the surface which is to give the figure and direction to the fur, it will hardly be disturbed by the influence of the atmosphere in its further passage. Suppose this concave to be placed within an inch of the cone, of course very little disturbance will occur in going that inch.

Now suppose that, instead of throwing the fur up into the concave, we put a picker with reversed action over it, which is exactly what is done by the defendants' machine, and throw the fur down upon the convex of the concave, the Court will see that we have got exactly the same directing surface, but with a disadvantage, and why? Because we have no sides here to prevent the fur from being wasted, and hence some waste may occur. It is almost always the case with infringers, when they undertake to pirate the principle of a machine, that they make it inferior to the original. Just so here. In order to give it the appearance

as much as possible of something unlike our trunk, they not only reverse the action of their picker and throw the fur down, thus giving it a forward direction substantially the same as if it were thrown up into the concave, but they cut off and make their directing apparatus very short. Suppose this concave form I hold to be a trunk cut off to half its present length, would your Honors say that a person might use that because it was so short that it reached but half-way to the cone? The appellees get the same benefit from throwing the fur down upon the deflecting surface or outside of the trunk, that they would by throwing it up into the concave of the trunk, for the reason that the curve of the directing surface is such that although the fur after leaving it, having a distance to go, will somewhat change its figure and direction, and thus get thrown to the one side or the other of the cone, still substantially the figure is given to the fur by this deflector, and it moves on in the line indicated by the shaping surface exactly as it does in Wells' machine.

Your Honors will observe that there is the deflecting surface which they used. [Exhibiting it.] Boyden, the patentee of their machine, describes but one of the two modes of deflecting employed by them. That described is a smooth surface, the other is by a stepped surface. The stepped one is shown in their practical machine. It is very short, but it necessarily gives the proper figure to the fur at the start. The fur moves with a velocity due to the motion of a picker revolving three thousand times a minute, and also with the velocity due to the suction which is constantly operating to draw it toward the former. The direction thus given to the fur by that guide, by the reverse action of the picker throwing the fur down upon it, is exactly the same as though, instead of being so thrown down, the guide were made with a corresponding concave surface into which the fur should be thrown by the picker moving in a contrary direction. In either case you get exactly the same figure of fur, and although there is a difference in the guiding instruments, it is only the same difference that an ingenious pirate will always make in any two machines hav-

ing the same mode of operation, and when I come to read from the patent of Boyden, your Honors will see that he actually describes that it is necessary, in order to work his invention, to reverse the action of the picker from what it is in our machine. He throws the fur down upon the guide instead of throwing it up into the trunk. [The learned gentleman illustrated all these points by reference to the machines.]

In this connection, and before proceeding farther in the general line of observations I shall make—and I mean to make them as brief as possible—I will notice another statement to be found in the printed argument. It is repeated over and over again that the re-issued patent of 1856, a patent not here in controversy, was fraudulently obtained to cover the A. B. Taylor patent or machine. It was of no consequence to introduce that into the gentleman's argument except to create an impression against the honesty of Mr. Burr. But it is said that that was re-issued as a patent for a process, and the Court will find the criticisms upon it on pages 59 and 60 of the argument of the learned counsel, and the opinion of his Honor Mr. Justice Nelson, and of Judge Ingersoll, is referred to as delivered in a case upon the patent of 1856, to show that those learned judges were obliged to give it a very narrow and restricted claim in order to maintain its validity. On page 60 the learned counsel says:

"Burr, however, failed to satisfy the Court that Taylor had infringed. The Court, in order to save the re-issued patent, were obliged to limit it, and no reasonable bounds could be set to its claims which did not exclude Taylor's new machine from its scope."

The learned judges, in the first place, did not decide that the patent was for a process; on the contrary, they decided that it was for a combination of machinery, exactly as every person would have understood the claim to be, and then, instead of giving it a narrow construction—I read from the opinion of the learned judges—they say:

"It is clear that before the discovery of Wells, no machine was known or used that did, by any means, *direct*

a sheet of fur on to a section of a revolving exhausted perforated cone or other former, etc. . . . . By such machines" (as were before known) "the fur was deposited on the exhausted cone by the power of gravity, or the power of the exhaust, or by the combined power of both, and not by the power of the machine *directing* how and in what manner the fur should be distributed on the cone."

Here the learned judges are dealing with all the machines before known, and they came to this conclusion on final hearing:

"And this latter mode (by directing the fur) of forming the bats of fur on a perforated, exhausted cone distinguished the plaintiff's machine from all machines known or used before the discovery of Wells; from the Blanchard machine; from the Williams machine; from the Fosket machine; and from any other machine to which our attention has been directed."

And yet in the argument we are told that the learned judges limited the patent in order to save it. We ask here exactly the construction which the Court there gave to that patent. We ask this Court to say that down to the time Wells invented a means of directing the fur by the power of the machine, it was unknown, and that he was the first to introduce it. The Circuit Court in New-York, in this opinion, go on to say that as the machine complained of contained no means, interposed between the picker and cone, for directing the fur, therefore it did not infringe.

The learned counsel also says that when we patented the machine in England we did not patent the Wells machine, but patented the Burr and Taylor improvement. If your Honors will look at page 245 of the Record you will find that, in the very first statement in the English patent obtained on behalf of Burr by Newton, although neither the specification nor the drawing was drawn by my brother Keller—it was framed there and the drawing made there; in the very first statement of what the invention consisted in, the Wells trunk is set out as the leading and essential feature, and in the next statement of the invention the Burr

and Taylor improvement is set out; and why were the two united together? Simply because to have taken out two patents, as your Honors know, would have been extremely expensive, inasmuch as the fees for obtaining patents there are large.

Then I understood the learned counsel to say that there was some charge of fraud to be predicated against those who took out the patent of 1860, because they waited until Mr. Baldwin had left the office of Examiner of Patents. If I am not misinformed, Mr. Baldwin continued there until April, 1863.

Will my brother Keller tell me what were the duties of his office?

Mr. KELLER.—That of supervising inspector, and every re-issue in that class passed under his supervision, as I had it from his own lips yesterday.

Mr. HARDING.—Permit me, Mr. Keller, as that is a fact stated out of the case, just to state what I did say. The indorsement on the application of 1856 shows that Mr. Baldwin was examiner. The indorsement on the Re issue of 1860 shows that Mr. Van Sanvoordt was the examiner. The names of the parties who passed the re-issue appear in full as a revising board, and Mr. Baldwin is not one of them.

Mr. KELLER.—I will make the statement exactly as the fact is: When Mr. Thomas became Commissioner of Patents, Mr. Baldwin, the examiner of this class, being an experienced lawyer as well as a man of considerable attainments, was detailed to take special charge of the legal portions of the examinations, but he continued in charge of this department of examination—Mr. Van Sanvoordt, his assistant, doing the immediate duty, but subjecting every case of re-issue to Mr. Baldwin's supervision, as I had from his lips yesterday.

Mr. HARDING.—On page 243 of the Record, the Court will find the proof as to who were the revising inspectors who passed it—William B. Taylor and T. R. Peale.

Mr. STOUGHTON. As I before remarked, but for the fact that these charges are printed, to several of which I have

called the attention of the Court, and of course were made with deliberation, I should not have troubled the Court with them, except perhaps as to the first, as to which it seemed necessary to show to your Honors what was before Judge Kane; and I only regret that it was thought necessary repeatedly in the course of the printed argument to make use of the name of my brother Keller in every connection where a charge of improper conduct on the part of Mr. Burr is alluded to. I had supposed that it was quite unusual to introduce the name of counsel at all into papers of this character, and I regret that it has been introduced here.

I now proceed for a short portion of my time to consider what this machine was that worked this revolution and saved to the country, in the short space of time mentioned in the proof, some nine millions of dollars. What was it? How was the machine, thus developing such results, organized, and what was its mode of operation? In other words, as the phrase, "mode of operation" is frequently used in these cases, and as complaint has sometimes been made that it does not very clearly indicate what was the essential feature of the machine, I mean by it, by what practical means does the machine, or do the parts of the machine, as organized by Wells, operate upon the fur for the purpose of converting the raw fur into a conical bat? How does the machine, and how do the operative parts of the machine operate upon the fur? What do they do to it? for that which they do to it, and the manner in which it is done, constitute its mode of operation.

Now, we have in the Wells machine, first, a rotating picker, or any thing else operating substantially like it—I do not care what, because, although we have heard a great deal about altering statements concerning the state of the art in the re-issued patent, your Honors will find that in the original Mr. Wells says the rotating brush or picker may be constructed of bristles, or in any other mode. Of course it is utterly immaterial how you construct it. I have not a doubt that a fan, if it would operate, would be

substantially the same thing, because the purpose is this: The fur is to be presented to the action of rotating beater, that it may be thrown forward. It is to be presented to the action of the beater by being first put upon an endless apron, which carries it along for that purpose. The brush or picker revolves and throws the fur within the suction of the cone. That is the way it acts on the fur, and such is its mode of operation, no matter how constructed. Now, the construction and mode of operation of the exhausted conical former is this: It is filled with perforations, as your Honors see, and underneath has a revolving fan which is constantly exhausting the air within the cone, and of course the surrounding atmosphere is rushing to fill up the place so exhausted. The operation then of that instrument is to draw to it the fur, and by the suction within, to hold the fur upon it. It operates upon the fur, therefore, first, by drawing the fur towards it; second, by holding the fur upon it as it is thereon deposited. If it is deposited thick in one place and thin in another, this exhausted former has the capacity of holding it there as it is deposited. But your Honors will perceive that whilst the action of the rotating beater is to throw the fur, its capacity is not to throw it in any particular direction, or to regulate its motion. It throws it, and that is all. Your Honors will perceive, too, that as the capacity of the exhausted former is to suck and hold the fur upon it, it does not suck in such a way as to regulate the deposit, but it sucks indiscriminately, and as the fur is deposited upon it so it is held there.

But that cannot make a hat-body, and why? First, the hat-body, in order to be of any value, must be of unequal thickness. It must be thicker at and in the neighborhood of the brim than in the body of the hat, or in the tip, and it should be a little thicker where the crown is joined to the sides than it is in the sides; so that it is an artificial felt, and the fur, in order to lodge upon the cone so that when the hat-body is made it will make a hat of any value, must be lodged there in the varying thickness required by the hatter. That involves directing the fur, and therefore

Wells for the first time—no man had ever done it before him—no man had suggested the idea before him—thought he could direct this light material, and by using a beater revolving rapidly, he could, by the aid of that, cast the fur upon a directing surface, and permit it to leave that surface as it moved rapidly forward in such a shape as to lodge upon the cone—thicker below than above—and a little thicker near where the sides joined the crown, if he desired it, than on the tip.

Then what is the mode of operation of the directing surface? It is to receive the fur as it passes from the picker, and permit the fur to pass along its surface toward the cone, and its office is where the fur leaves it, to give such shape and direction to it, that when it reaches the cone it shall be of the right relative thickness; that is the way it operates on the fur; so that the mode of operation of this machine is, *first*, the picker throws the fur indiscriminately: *second*, the deflecting and directing surface receives, guides, and directs, so that the cone shall receive its proper thickness in each appropriate part; and *third*, the cone standing there receives and holds, and then the operator winding a cloth around it, or otherwise operating to harden it a little, so that it can be removed — because it cannot be removed until it is hardened somewhat—withdraws it, and it is then felted. That is the Wells machine. That is its mode of operation, if I understand it.

If your Honors please, changes in the forms of these three several instruments were easy to make, still retaining their mode of operation, Wells did as he was bound to do; he described the best means known to him for accomplishing the end in view, and that is what the patent law requires. He could have described many forms undoubtedly, but he described one, and that one, it turns out, is the best form. It is to throw the fur into the inside of the guide or trunk, instead of down upon the outside of the guide, and why? Because, if thrown into the inside, it not only takes the appropriate figure, and receives the due direction, but the fur is prevented from wasting by floating either way into the atmosphere of the room. So he described the best way as

the law required that he should; but your Honors will see that he contemplated changes. On page 99 of the record—and I refer always to the original specification of Wells, never to the re-issued, the descriptions being in both the same in substance—he says:

"The fibres, as they pass from the feed-aprons, are acted upon by a brush that rotates with great velocity, and which is composed of parallel rows of stiff bristles projecting from a cylinder, but which may be differently constructed and composed, if desired."

Again he contemplated using a form different from the cone. The invention was capable of being developed by means of a directing surface into a different shape from a conical shape, and therefore he says—I read from page 101:

"It may be well to add, as a mere matter of precaution, that this invention is not limited to the making of hat-bodies, but to the making of bats on formers of any other shape or configuration, the form of the delivery aperture of the chamber and the hood, and the movements of the latter being properly adapted to the change of form of the mould or former, with the restrictions indicated."

Your Honors will observe first, that he says, "Change the brush; make it any thing you like;" and then he says: "I do not confine myself to one former; change the form if you please; you have the means now of making any form you like; and to do that you must change the opening of the trunk to conform to the configuration which you set in front of it." Suppose that after that a person should say: "I propose to make a form different from that; Wells does not, in his drawing, tell me exactly how to make the opening of the trunk, so as to throw the fur in properly regulated quantities upon it, but I have made an opening that will exactly fit the former. I have selected and wish a patent for that." What would a Court say to a patent like that, should one be granted, in view of the description by Wells, to which I have referred? It would, no doubt, say:

"The substantial means of doing all this were described by Wells. You are told by him to change your former if

desired, and you are also told that if you alter that, you must change your directing instrument to suit it; and when all that is suggested in the patent, any mechanic can do it. It is the work of the artisan and not of the inventor."

And yet we are told here that the invention was not perfect until a flexible trunk was made by Burr and Taylor. That was undoubtedly a valuable improvement upon the inflexible trunk of Wells, but it was an improvement upon *it*, and it only. And what was that? Mr. Burr, today, has in his establishment two hundred and sixty-four cones of different sizes. They are required to make the varying sizes of hats for the trade. Your Honors will observe that if the opening in the trunk be made exactly to suit a particular cone, that trunk will suit no other cone. Why? The opening is to be so shaped that it will deposit the fur in varying thickness upon the cone, exactly as required. If, therefore, Wells had left his invention without the hood, it would have been necessary (and to do this, his directions were specific enough) to make a new trunk for every different cone to be operated upon. That would have been expensive. And why did he put his hinged hood on, and why the hinged flap below?

This may be answered by a reference to and explanation of the models of his machine. Here is the mouth of the trunk; it is adapted to no particular cone, as used in practice, and why? It is a trunk intended to be used in the machine for many different sizes of cones. Then, how did Wells with his then knowledge propose to adapt one trunk to many different cones? He proposed to do it by three means. First, he has a set-screw by which it could be elevated or depressed to suit the former in front of it. Then he has a hinged flat at the bottom which can be worked up and down to suit a longer or a shorter cone. And thirdly, he has a hinged hood at the top, which can also be made to assist in adapting the opening of the trunk to cones of varying sizes. This was his method of doing it. Then Burr and Taylor say: "We are going to change your trunk, and improve it, Mr. Wells." "Very well," says Wells, "how?" "We are going," say they, "to relieve the trunk from the

use—first of the hinged hood, and second of the hinged flap." And how? Your Honors will perceive that there is a movable top to their improved trunk. Depress this top and the aperture of the trunk is shortened; elevate it, and the opening is increased in length to suit a higher cone. By means of a couple of pieces which embrace the flexible sides of the trunk, its opening can be made narrower, and the form of its delivery varied to suit cones of different shapes and sizes. But your Honors will perceive that whenever this trunk has its aperture so arranged by means of its movable top and flexible sides, that the hatter is ready to do his work upon any particular sized cone, the opening of the trunk remains fixed, and he can go on making hat-bodies of the same form and of the same relative thickness by thousands and tens of thousands. Why? Because the coner, as he is called, sets the mouth of the trunk to suit each different cone employed, and when he has thus fitted the opening of the trunk to the former to be used, we have a machine which my learned friend on the other side calls an "automatic" machine. Why? Because he says it will go on making hats — any number of them—without change. Wherein does that differ from the Wells machine, if you throw the hood away? Look at it, if your Honors please. Suppose that I have fitted this trunk, made of flexible material, with a movable top, to this shaped cone; but now, instead of using the Burr and Taylor improvements, I take another trunk of inflexible material, having exactly the same form and delivery, and put it in front of the cone, or back of the cone, will not that make hat-bodies exactly as the flexible trunk will make them? Of course it will. Then, if when I have set this flexible trunk to suit a particular cone, I make it inflexible, wherein does that differ from a trunk made of a material inflexible in its nature, which I make with an opening of exactly the same size and shape? The invention of Burr and Taylor consisted in making the trunk of Wells with flexible metal sides and a movable top, and thus the coner was able to adjust a single trunk without hood or flap to cones of all sizes; but when set so as to be operative, it works precisely as though made of inflexible

material incapable of being changed. And to what is this improvement due? It is due to the fact that Wells showed the means of directing the fur and of varying the delivery aperture of his trunk. He said, in his specification, "If you wish to change your form of cone, alter the shape of your aperture;" but in order to accommodate one inflexible trunk to many cones, he put upon the trunk a movable hood at the top, and a movable flap at the bottom, and thus he was able to approximate to that which the improvement of Burr and Taylor completely accomplished when they came to apply it.

I have thus described all there is of the Burr and Taylor improvement. To say that the machine is any more or less automatic because this is added to it, is an absurdity. The trunk is not automatically changed to suit different cones. This is done by the hand of the coner. It is not changed by a power within itself; but when it is set, it works by a power within itself to guide the fur; and when the inflexible trunk has a like opening, that also works by a law of its own in the same way exactly. So Renwick, the expert, testifies, and this is obvious from an examination of the machines. The advantage of the improvement was, that by it one trunk without hood or flap could be adapted to many cones giving exactly the opening desired. That, however, was but an improvement upon the Wells machine, and it was so claimed by Burr and Taylor.

If your Honors please, I have tried to show to this learned Court how these several parts of the machine, as organized by Wells, operate upon the material to be formed from the fur into a hat-body. I have tried to show that their mode of operation is to cast the fur from the revolving picker upon a directing surface so formed that it would guide and lodge the fur thicker at the base of the cone than at the top, and yet distribute over its entire length. Now Wells was entitled to claim that mode of operation if he was the first to organize the machine by introducing into it the conductor or guiding surface; and whether that guiding surface be used inside or outside, convex or concave, is utterly inconsequential. The idea is given: the forms can be varied at pleas-

ure. Here I beg leave for a moment on that subject to call the attention of the Court to the case of Winans *vs.* Denmead, to be found in 15 Howard, 341–2–3. That was a case adjudicating not upon an art, not upon a principle, but upon a machine. It was the car-body case. That case decides this general principle; that wherever an invention is not in its nature limited to one form, which the Court say can hardly ever occur, wherever its mode of operation is capable of being developed in different forms, the description of the machine, and the mere claim to the parts described, whether in combination or as an organized machine without specifically claiming other things substantially the same or equivalents, will give in judgment of law the exclusive right to all that was, in fact, invented, and every thing substantially like it, including equivalents. The Court say in that case upon this subject:

"In the numerous cases in which it has been held that to copy the patentee's mode of operation was an infringement, the infringer had got forms and proportions not described and not in terms claimed. If it were not so, no question of infringement could arise. If the machines complained of were a copy in form of the machine described in the specification, of course it would be at once seen to be an infringement; it could be nothing else. It is only ingenious diversities of form and proportion, presenting the appearance of something unlike the thing patented, which give rise to questions; and the property of inventors would be valueless if it were enough for the defendant to say: 'Your improvement consisted in a change of form; you describe and claim one form; I have not taken that, and so have not infringed.'"

Of course that is so. Our patent would be good for nothing if the law were not so. I fancy there never was an infringement by using a form just like the form described in the patent. The learned Court below, in delivering the opinion which has been referred to here, seem to have supposed that "the combination of devices essential to the successful "operation of the machine was the connecting of the rotatory "brush with the tunnel or chamber of the *form* described

"in combination with the cone placed in front of the deliv-"ery-aperture." Undoubtedly if the patent of Wells is to be limited to the form described, and is not to embrace the mode of operation, there is no infringement; and then if it is limited to the form, the question would arise: How much must the trunk be cut off not to infringe? how much of one of the sides of the trunk must be removed that there may be no infringement? how much of the bottom should be removed that piracies may be justified? Your Honors cannot fail to see that if this invention—with its saving of millions to the public, its development of the first step in making hat-bodies by machinery, its revolution effected in the manufacture of hat-bodies—is to be regarded as one of form merely, and if the patent is to be construed as covering that only, infringers may take the substance and the idea and leave the grant utterly worthless.

If I am right in the proposition that Wells was the first to unite with the picker and cone a directing surface of any kind, the case of McCormick in 20th Howard is exactly in point to show that we may cover not only the trunk but equivalent means. There the patent alleged to be infringed was for a claim to such a combination as would make a divider in the reaper; to divide the standing grain to be left uncut from the grain to be cut. That divider was a compound shaped thing as described. The learned Court say that if McCormick was the first man to unite with the reaping machine a dividing instrument, he was entitled to claim equivalent dividing instruments. The Court did not say that if he was the first to unite with the reaping machine a dividing instrument of a particular form, he could claim a dividing instrument of that particular form; that would be absurd; but that he could claim a dividing instrument operating as the equivalent of that—having the functions of that. At the same time the Court say that if the reaper had before been used with a divider for a similar purpose, and if McCormick merely improved upon an old divider—inasmuch as the defendant had also improved upon one in a different direction—McCormick could not claim the

defendant's as an infringement of his; and why? Because, if McCormick was not the first to conceive and contrive and put into the reaper a divider for the purpose of dividing the standing from the cut grain, but found such an instrument and merely improved it, another who should come along and improve it in a different direction would not take his idea, because he would not improve it in his (McCormick's) direction; but if the latter first made a divider, however rude, and was the first to unite it with the reaper, and another came along and improved upon or changed it, or even if he engrafted upon that which was McCormick's that which he was entitled to patent, this gave him no right to use the thing improved. Let us see whether that is not the law as laid down by the Court. The Court there say that as several machines had before been used with dividers, McCormick's invention was but an improvement upon a known divider. I will read from the language of the Court:

"In order to ascertain whether the divider used by defendants infringes that of the complainant, we must first inquire whether McCormick was the first to invent the machine called a divider."

Here we should inquire whether Wells was the first to invent the machine or device called the director or the guide, and to incorporate it into and make it a part of the hat-body forming machine; the case at bar is stronger for Wells than was the case of the divider for McCormick. Reapers had been before known; they had been used before McCormick invented. Hat-body forming machines never had been used until Wells invented. He organized the first machine that would make a hat-body. If he did not, my argument falls, and all I say is worthless. He was the first man to organize the union of a rotating fur-throwing instrument of any kind, with a cone and a guide to deflect and control the passage of the fur as it moved toward the cone. He was the first to make a machine of any kind that ever made a hat-body. McCormick was not the first to make a reaper. The learned judge further says:

"We must first inquire whether McCormick was the first to invent the machine called a divider, performing the func-

tions required, or has merely improved a known machine by some peculiar combination of mechanical devices which perform the same functions in a better manner.

"If he be the original inventor of the device or machine called the divider, he will have a right to treat as infringers all who make dividers operating on the same principle, and performing the same functions by analogous means or equivalent combinations, even though the infringing machine may be an improvement of the original, and patentable as such."

McCormick *vs.* Talcott, *et. al.*, 20 Howard, p. 405.

Now if Wells was the first to unite in a hat-body forming machine, a device, or machine, or instrument known as the guide or director, he may stop any man who uses an equivalent for this, even though that be patentable and patented as such, and be in fact an improvement upon the guiding device of Wells. That I understand to be the law of this case, and of course one of the inquiries here is, whether Wells stands in that relation to his machine. If he does, then upon well-established principles he is entitled to cover equivalents and equivalent means, and then he gets but his invention.

Let us look now for a moment at the appellees' machines, and at the circumstances under which they commenced using them. They were using two Wells machines. It appears from the Record—but I have not time to read from it—that about 1859, failing to get a license to use more, or not getting such a license, they employed a man by the name of Boyden to contrive a machine which should not infringe; and what did he do? He took a carding engine such as is described by Williams, and put in front of it a conical former, knowing perfectly well the scope and range of the invention of Wells, and tried to form hat-bodies on such a machine—without any means whatever interposed between the picker and cone to guide the fur. The result of this attempt affords the most controlling evidence of the worthlessness of the Williams invention. Two of the defendants' witnesses swear that they tried to work the machine, so arranged and experimented with it for half a day, and then abandoned it as worthless.

Mr. HARDING.—Mr. Stoughton, I will thank you to read that place in the testimony which you refer to, where they used a carding engine with a cone.

Mr. STOUGHTON.—I will do it. I speak of a revolving fur-throwing mechanism. I am not going to be caught by the criticism that they did not use a full carding engine. I speak of the revolving picker and the cone exhausted placed in front of it—the fur-throwing mechanism employed by Wells substantially—and I will read from the record.

Mr. HARDING.—As you correct it now by saying they used a picker, it is of no consequence. I asked you where they used a carding engine.

Mr. STOUGHTON.—The carding engine has small cards running over a large cylinder, and many other things. I use the phrase "carding engine" in the general, because the fur was thrown by a revolving picker, but it is utterly immaterial how thrown, there was no directing surface. If it is very material that it was not in the form of a full carding engine, that is new to me. I call it a carding engine, because it appears somewhere in the record that the appellees had four or five in their garret, and I believe one was moved down. All the parts of it may not have been used, but some of them were. I will read from the record the testimony to which I refer, on page 262:

"Q. 8. Had you knowledge of a machine which was put in Mr. Boyden's room in the spring of 1859?

"A. Yes, sir.

"Q. 9. What was the construction of that machine, and what was done with it? State wherein that machine differed from the Burr machine, or agreed with the Burr machine?

"A. Different from the Burr machine; had no trunk on; perfectly naked from the brush."

That is, it was a revolving brush, and naked from that to the cone; no trunk; no means to guide.

"Q. 10. Where was it brought from and returned to?

"A. Brought from the fifth story above, room above, in the garret, and was returned there.

"Q. 11. That garret was a rubbish room?

"A. Yes, sir.

"Q. 12. What experiment was tried with the machine which you allude to, and with what result?

"A. Well, the experiment was tried to form a hat; we found it wouldn't answer. The machine was taken down after that, and carried in the above-mentioned place."

Seaver, he testified to the same experiment. I read from page 275:

"Q. 30. How long was that machine up?

"A. I don't recollect how long it was up. I don't think it run over half a day altogether.

"Q. 31. You say that it did not make good hats. What was the difficulty?

"A. The fur would fly all over the room most.

"Q. 32. What was tried between the cone and brush?

"A. We had nothing, I believe."

In other words, it was a Williams machine—a fur-throwing apparatus, with a cone in front and no means of directing, and therefore, of course, worthless. Then what was next done by these gentlemen? They knew perfectly well when they tried that machine, that the spirit and substance of Wells's invention consisted in a directing and deflecting surface. They, however, were determined to employ machines, and to run the risk of infringements, and so they made a machine such as your Honors see here, and Boyden actually patented it. I wish to call your Honors' attention to that patent, because it is one of the most conclusive of admissions that it was an improvement, as the Patent Office understood it, upon the Wells machine—of course an improvement in the wrong direction. That patent will be found at page 399 of the Record, and Boyden in the patent described the invention thus:

"This invention relates to an *improved* mode of directing or guiding the fur to the cone, as hereinafter fully shown and described, whereby trunks and all other comparatively complicated appliances hitherto used for the purpose are dispensed with, and an exceedingly simple and efficient device substituted therefor."

"Improved mode of directing!" As there never was any mode of guiding and directing the fur to the cone until Wells made his invention, of course the improvement here mentioned was upon that and that only.

It is within the judicial knowledge of one member of this Court that some time since the mode of directing described by Boyden has been abandoned; the appellees have adopted a different means; and even in this record the answers do not set up that the defendants work under the patent of Boyden; nor do they even refer to it. I read farther from the specification of Boyden:

"The invention consists in placing directly in front of the picker a plate, so bent or curved that its surface will have a certain relative position with the axis of the picker and the surface of the cone, and give such a direction to the fur, as the latter is thrown on it by the rapid motion of the picker, that the fur will be drawn properly on the cone by the exhaust or suction within it."

Then he describes the plate by which this is done, and then he says, (and your Honors will see its significance:) "The picker D, although of usual construction, is rotated in a reverse direction to those in ordinary machines."

That is, as they are going to throw the fur *down upon the outside surface, instead of up on the inside*, they reverse the action of the picker. In other words, they have employed exactly the idea adopted by the infringer upon Watts's Engine mentioned by the English judge: they have turned the thing bottom side up, and that is all. The claim of Boyden, after particularly describing this means, is:

"I do claim as new, and desire to secure by letters patent, the fur-director or plate F, curved or bent substantially as shown, and arranged in relation to the cone B and picker D, to operate substantially and as for the purpose set forth."

JUDGE WAYNE. What is the date of that patent?

Mr. STOUGHTON. January 10, 1860. Now I should like to inquire on what that is an improvement? It is an improvement on the means of directing the fur. It is so claimed. Then an improvement on what? On Wells, if on any thing! There was nothing prior to Wells's which in

any manner directed the fur. It is like many of the devices adopted by infringers--very inferior to the original; but all there is in it that is of value, is the mode of operation taken from Wells, and of course the infringement is palpable. It is just reversing the picker and throwing the fur down upon the outside of the guiding surface, instead of revolving the picker as described by Wells, and throwing the fur up into the inside of the guiding surface. I have now said all I propose to trouble your Honors with in reference to the mode of operation of the Wells machine, and of the identity of that with the means employed by the appellees. My time is limited, and I have some further observations to make upon other branches of the case.

If your Honors please, what are the defences set up? One is, that our re-issued patent is void. Why? In the first place, the appellees say that the oath to the petition for re-issue was not in form. Now, by statute no oath was required. In terms the statute does not require it. An oath is required to an original application for a patent, but his Honor Judge Story has held that the absence of the oath, even in that case where the statute requires it, does not invalidate the patent. That will be found in 1 Story's Reports, page 336, and is referred to in Curtis on Patents, section 174. "An irregularity," says Curtis, "in the form of the oath will be cured by the issuing of the patent, and it seems that a patent would be valid when issued, although the oath might not have been taken at all." "It has been held that the taking of the oath is only a prerequisite," etc., and for this position he refers to the case in Story. That objection is, therefore, disposed of. But permit me to say that the oath as drawn is exactly in the form in which a conscientious man would take it, and which is authorized by the current of decisions on the subject. The oath is, that the patent, to be surrendered, by reason of accident, inadvertence, or mistake, was defective, and therefore not fully available to the assignee. The criticism is made upon the part of the oath which says it is not fully available to the assignee, and the idea is sought to be conveyed that a patent cannot be surrendered and re-issued if it is valid.

The answer to that is, that it is just as much the right of the patentee to make a broader claim where his patent is valid but inoperative, because it does not claim all he is entitled to, as where he has claimed too much. That is well settled; and I beg leave to read a single sentence from an opinion of Mr. Justice Grier on that point:

"The mistake of claiming too little in the original patent has an equal claim to correction with that of claiming too much."

And then the learned Judge makes some observations of value on the subject of re-issues, and he likens the case of an inventor to a man who has title to a piece of ground which he has paid for, but his fences are not up so as to mark his boundary line; and the learned Judge says, that although a pirate may squat upon the land and get some benefit out of it by his trespass, he certainly can get no right in it; and he alludes to the outrage of permitting men to take any part of the inventions of patentees, because they have not particularly bounded and defined what they have done in terms; and he says, in substance, that it is a sufficient hardship that the party who surrenders thereby loses all right to prior damages without giving to the pirate a title to that which the inventor ought to have had secured to him by the law of the land.

Here let me say, that the Constitution which authorizes Congress to secure for limited periods to inventors and authors their discoveries and writings does not limit the *quantity* to be secured. *The whole thing invented is to be secured;* the time only is limited; and courts of justice have carried out that idea presented by the Constitution, and have said that wherever they could they would see that the inventor was secure in all he had done; and so in 6th Peters, a case where Mr. Webster argued against the power of the Secretary of State to accept a surrender and make a re-issue before the statute authorizing it was passed, Chief Justice Marshall delivered the opinion of this Court, in which it was held that without a statute authorizing it, a patent might be surrendered and re-issued in order to cure a defect in it; and the Chief Justice intimated — indeed, he

said -- that it would be dishonorable in an individual who had parted with property for a sufficient consideration to refuse to correct the deed; and ought not the government to correct it, and ought not the courts to effectuate the patent and hold it valid when corrected, if no more was claimed than the inventor did invent? Of course no fraud could be practiced if the inventor was held to what he was the first to do. So here the courts again and again have held that after adjudications declaring patents valid, still parties might get re-issues—the learned Judge Grier, in the case I have referred to, saying that the mistake of claiming too little is as much entitled to correction as that of claiming too much.

And yet in the opinion by him delivered when deciding this case in the court below, we find the same learned Judge using this language:

"Now, after a patent has been declared to be valid, the specification without defect, and the claim for nothing more than the invention, after it has undergone examination for many years, and courts and juries have decided that the patent is not invalid, through inadvertency, accident, or mistake, the assignees come forward and make oath, without scruple, that their patent is defective and invalid."

That carries the idea that the patent ought not to be surrendered or re-issued when it is valid; but this learned Court will recollect that the Woodworth patent, after it had been declared valid as it originally stood, and declared valid in a trial before Judge Story of almost unexampled length, was surrendered and re-issued, after it had been, if I remember aright, a second time extended. It is a singular fact, too, that in 4th Howard an equity case is reported which came up on appeal from Kentucky in a bill filed on the original patent, and at the same term a case at law came before this Court from another circuit in a suit brought upon the re-issued patent, and this Court sitting here said that the complainant from Kentucky was entitled to insist upon the validity of the original patent, and its validity was affirmed; and at the same term the validity of the re-issued patent was also established.

Judge NELSON.—The Kentucky complainant was an assignee of the original patent, but he was not a party to the surrender, and of course he had a right to maintain his privileges under the old patent.

Mr. STOUGHTON.—Certainly; and it was the only way in which it could come up where the parties stood in such a relation—one claiming under the original patent—and the other under the re-issue. I only mention it to show that the Court sustained both. They said the original was good and at the same time they said the re-issue was good. Of course they did not say the re-issue was good because the original was invalid. The word "inoperative" in the statute means simply that the patent must be inoperative to give the patentee the benefit of his entire invention.

Now what is urged against the validity of this re-issue? Have your Honors any distinct idea of any charge of fraud upon which it is sought to be invalidated? I confess I have not. What is the law upon this subject? *First*, that the re-issue is to be presumed valid; and strong presumptions are entertained that it is not only valid, but for the same invention, and that presumption must be overcome by counter proof. I cite familiar law on this subject. What is the proof relied upon here? First, it is said that when Wells or his assignees came to surrender and re-issue, they left out the hood and did not claim it in the re-issue, did not treat it as an essential part of the machine. Is that so? The original patent will be found to describe the office of the hood in exactly the same terms that the re-issued patent describes it, the latter giving it the name of "upper deflector" instead of "hood," and in the re-issue the hood is claimed as an essential part of the invention, and the claim is almost identical with the language of the claim in the original patent. I call your Honors' attention to page 27 of the Record, where the claim of the re-issued patent to this hood will be found:

"I also claim the combination of the rotating picking mechanism, or the equivalent thereof, the pervious former, with its exhausting mechanism, and the upper deflector,

substantially as described, to regulate the deposit of the fur fibres on the tip of the pervious former, as set forth."

That is disposed of. Then again it is said that there was an effort, which was finally successful, to change the state of the art as set forth in the original, where it was said that efforts had been made by a revolving *brush or picker* to throw fur upon an exhausted cone, and failed; and the charge is that the attempt to change the words "brush or picker," and to substitute the words "beater or fan," was a fraud. My brother Keller, when he undertook, to set this statement right, and at last succeeded, did that which was quite unnecessary, except to make the statement perfectly accurate, and although a large part of my learned opponent's argument is devoted to showing that this was a fraud, it turns out that the state of the art as now stated is exactly true. Mr. Keller, in his letter to the Commissioner of Patents, referred him for the authority to make this correction to Williams' American specification, and told him to look at that and see if he was not right. A most singular way of committing fraud! Wells was mistaken, said my brother Keller, in saying that efforts had been made to form hat-bodies by means of a brush or picker. He should have said the fan or beater was employed, and the Commissioner, in verification of this, was invited to look in his own office at Williams' American specification, and judge for himself.

Commissioner Mason, it seems, did not agree with my brother Keller, but a subsequent Commissioner did, and it turns out that the American specification, which described a means invented by Williams, as he thought, of making hat-bodies, and which was cancelled as good for nothing, stated that he used for this purpose a fan or beater with his carding engine, for the purpose of making hat-bodies, instead of a brush or picker, and a devil cylinder for the purpose of making bats. My learned opponent has taken up page after page of his argument with showing that if we will only substitute a cone in the place of the thing that formed a long bat, and will place it in front of the devil cylinder, then we shall have a picker used for hat-making, in which case he argues that my brother Keller was

wrong when he said that a revolving picker had not been used for that purpose.

Now Mr. Keller was referring to what had been in fact used, and not to what, by an ingenious effort at interpolation, *might* have been employed by Williams, but which he nowhere in his specification states that he in fact did employ for the purpose of making hat-bodies.

These seem to be about all the objections which have been urged against the validity of the re-issue, except one I will now mention. The learned counsel, in his argument, has taken great pains to show that, after all, when my brother Keller came to get the re-issue of this patent, he left the word "picker" in three times, and it is insisted that he had agreed with the Commissioner to leave it out altogether, and therefore that it was a fraud on the Commissioner, not to do it. That also was an extraordinary fraud, because, when the specification of the re-issued patent is received by the Commissioner, he directs how it shall be amended, and when the amendments are made, and sent to him, he, or his examiners, of course, look over the specification, not permitting the patent to issue until it is properly corrected.

And yet my learned opponent says that because the word "picker" was left in three times—though it was stricken out a great many times — therefore a fraud was committed. Really, it is not worth while to take up the time of this Court with any further observations upon that. Nobody pretends that the word extends or in the least affects the grant.

Now, with the permission of the Court, I will say a few words about the claim of the re-issued patent. The description of the invention in the original and in the re-issue is substantially the same. Upon the claim in the re-issued patent, considerable criticism has been made. I understand it to be just this; not a claim to an abstraction, but a claim to the combination of the picker, the guiding apparatus, and the cone, substantially as described; and unless the defendants' machine incorporates into it these elements, or equivalent means, of course there is no infringement.

Judge WAYNE.—Do you mean of his own invention? Do I understand you to say that in the re-issued patent he can associate with his own machine, described as you said it was in the original patent, with the invention of another person?

Mr. STOUGHTON. No sir. Wells describes an organized machine in his original patent. That machine consists mainly of three things—a picking apparatus, a guiding apparatus, and the cone. In his re-issued patent, he claims, as I understand his claim, the combination of these three things, thus making an organized machine. That is what he describes in his original specification. He describes them to make an organized machine in his re-issued patent. He is entitled to those and to all equivalent means.

Judge WAYNE.—Equivalent means of his own invention or others?

Mr. STOUGHTON.—Of his own, of course. He can interpolate nothing into the re-issue which was not in the original. Hence we stand on the description as found in the original — the description in the re-issue being as it is in original—the ruling claim covers that leading combination. That claim, we suppose, is clearly infringed.

I have said that the idea of infringement, and this idea that our patent covers equivalent means, involve the proposition of fact that Wells was the first to do what I have indicated, and now let us see what is set up, for the purpose of showing that he was not the first to do it.

Here let me remark that wherever a patent is sought to be invalidated or affected by prior machines, or prior descriptions of machines, the prior machines must be practical machines, capable of being used. If they are abandoned or worthless experiments, the subsequent inventor and patentee may appropriate them if he chooses. They cannot be set up to invalidate a patent subsequently granted, if they are abandoned experiments, or if they are worthless. Why? The patentee has secured to him that which he has done, and that which he has done must be new and useful. He is entitled to the exclusive right to that, unless

somebody has done it before him; and in order to show that some one has done it before him, it must be proved that the person whose machine is set up had made one which was operative and useful; otherwise the thing patented was not previously in existence, and hence it is, as Judge Story remarked in a noted case — and it is familiar law — that abandoned experiments, worthless machines, whether described or made, are inoperative for the purpose of invalidating or affecting a subsequent patent.

Now let us take what is set up here, and apply these principles to it, and what have we got? We have first the Williams machine. I have said as much about that as I intend to say. That had no guiding apparatus; it was worthless; and though described in a patent, is among the abandoned experiments, and therefore cannot operate to affect the Wells patent. Besides, it had not the combination of Wells. Then take the Robertson machine, which was patented in 1838. Your Honors will, by an examination of the specification of that patent, find that it was not for the purpose of making hats at all, but flat bats; and your Honors will find also that the Williams English specification was not for the purpose of making felted hats, but was for the purpose of forming a bat of conical form, and dipping it in a material for the purpose of hardening it and holding it together. He expressly says in his English patent that his process is in contradistinction to felting. I have not time to read from it, but your Honors will find it so. Then we have the Ponsford machine, and what was that? It seems that Robertson and Ponsford had got a communication from a foreigner abroad. The communication, as Ponsford describes, it was this—I read from page 363 of the record to show the utter worthlessness of it upon the evidence — Ponsford proposed to make hats of cattles' hair, but I believe that has never been done, though I may be mistaken, and he says:

"The hair as it passes from the blowing machine is to be tossed or thrown in the air, from which it is to be sucked or drawn down upon the hollow, perforated cones or molds of metal or wood with an exhausting cylinder beneath."

Your Honors perceive that that is to be tossed from the blowing machine into the air, and this is the communication made by a foreigner. It nowhere appears that it was ever put in operation, and the authorities are that no presumption exists from the description of machinery in an English patent that it will operate. It is upon the defendants in a patent cause to prove affirmatively such machines in existence as are to affect or invalidate the patent sued upon. They must show affirmatively that such a state of the art exists as should limit the claim, or that such machines exist as would destroy the patent. Now here is a means described of tossing from a blowing machine cattles' hair into the air, and it is said that it will descend upon the cone. It is proven by the testimony of Till and Seaver that when an effort was made substantially of that character, to make hat-bodies by Boyden, the fur was thrown all over the room, and they abandoned it as utterly worthless.

I before remarked that wherever a machine is set up to invalidate a patent, it must be a machine capable of doing that which the patented machine does, or it is not the same thing; and of course as patents are granted to reward a man for giving to the public that which is useful, his grant is not to be taken from him by the fact that something has been described which is worthless. Nor will the law pick out of a worthless machine parts which might in an operative machine be valuable, and say that because those parts might have been valuable in a different connection afterward invented, that therefore the subsequent patent is to be invalidated or affected.

Now, take the Ponsford machine, even if Wells's patent for the hot-water process was before this Court, and it is not, (because the Court below, as I understand, dismissed the bill upon the ground that there was no evidence of its infringement, as there clearly was not, for nobody would pretend upon the evidence that infringement was proven,) but when this Ponsford patent shall be presented to the Court for the purpose of antedating the Wells process patent, the answer to it will be that Ponsford's process was suggested in connection with a mode of forming hat-bodies

utterly worthless, that never could be carried into operation, and therefore we have got the process of Ponsford, (even if it was exactly like the process of Wells) suggesting a means of taking a hat-body off from a cone without any description of the means for putting it on, and although we have got something described which, in connection with an operative machine, would be of value, yet, inasmuch as it is described in connection with an inoperative one, it comes within exactly the range of the law in reference to abandoned experiments, with no mode described of rendering them practically useful.

You cannot take a part of an abandoned, worthless machine, and say that ante-dates a subsequent invention, because if it had been united with a good invention it would have worked. That cannot be done. The thing described must be capable of operation, or it cannot ante-date and invalidate a subsequent patent. We cannot take out a part of a worthless machine, and say, "That I find to be useful." On the contrary, the law is that you may appropriate what was known before, you may use it, reörganize it, newly combine it, and although you cannot claim the particular thing you combine as new, you may claim it in its organized shape, as in the process patent. This mode of taking off is claimed by Wells, in connection, of course, with a mode of putting on; otherwise it would be utterly worthless; but it is not necessary to trouble the Court with any observations on that branch of the case.

This was the Ponsford machine. That, of course, had no directing apparatus. The fur was tossed into the air.

Then are we not entitled to equivalents as against all these machines? Clearly we are upon the doctrine of the cases in 15th and 20th Howard, to which I have called the attention of the Court. But what next? We next have the Fosket patent, and I shall trouble your Honors but a moment about that. Fosket, in his *caveat*, filed as early as 1842, does not allude to any mode of directing the fur, but he proposes to snap the fur by a bowstring toward the base of a cone, and let it creep along up the cone by suction. Of course there was no direction given to it. Then

he took out his original patent in 1846, and in that original patent he described no means of directing. What followed? In 1858 this man procured a re-issue with a view to set it up as against the Wells invention, and in that re-issue he interpolated what cannot be found in the description of the original, and what is not even hinted at there or in the *caveat*—a means of directing the fur; and what does he say? The defendants introduce that patent as evidence in their favor, and of course, therefore, we may resort to its statements as evidence in our favor. In 1858, Fosket says, I read from page 225 of the Record:

"The mode of manufacture pursued with machines of the first class is objectionable, principally because it is indirect, and because it requires much machinery, labor, and experience. The mode of manufacture pursued with machines of the second class is also objectionable, principally because no method has hitherto been devised by which the distribution of the fibrous material in the hat-body, so as to obtain a hat-body having the variation in thickness at its different parts, required by the trade and obtained by the hand process, can be obtained automatically."

He says the reason the machines have failed is that no means of distribution were known. He says this in 1858, and he means it to relate back to the date of his original patent; but the answer to that is, that our *caveat* was filed in 1844, and in that we described the means of directing. Fosket describes no means of directing until his re-issued patent of 1858, and he then says that machines have been worthless because they have not had the means of directing. We were before him, for we described our means as early as 1844, independent of the question of fraud in his re-issue, because clearly he had no right to incorporate in his re-issue a description which was not in his original. But in addition to all that his method was by a bow-string, and not by the revolving fur-throwing apparatus, and his machine never went into use. It is among that long list of abandoned and condemned experiments, neither of which ever made a hat-body up to 1845, when it was first made by Wells.

May it please your Honors, I have now in a hurried and not very connected manner gone over all I can say upon the subject before the Court; and inasmuch as I have no time to make any observations as to the A. B. Taylor patent, which is also in controversy, or as to the Hopkins patent, I shall leave those where my brother Keller left them. We suppose that we are entitled to a reversal of the decree below on this main case. If we are not, it is quite certain that comparatively every thing else is inconsequential. If we are not entitled to recover upon the Wells' patent, it is not of great consequence what becomes of the process patents of Taylor and Hopkins, which are practically of little value, because the Wells process is preferred and is now used by these appellees, and of course will be used by all who can use it until our rights shall be enforced under the patent for it; and although they were not using it at the time this suit was instituted, yet there is another suit in progress where the case has been submitted to the Court, and there it appears that they had employed it, and in that cause our right to it will be determined. Really, therefore, the great questions in this case are upon this Wells machine patent.

I ought, perhaps, to make an observation as to the relation in which the appellees stand to this patent. The Court will find upon the doctrine of estoppel, not technical estoppel, but upon the effect that their conduct ought to have here a question of some importance. They are working under two licenses, which very specially recite that we are the sole and exclusive owners of this patent or invention, and by those agreements they undertake not to use any other machines containing these improvements, and in one sense this may be considered as a suit to enforce that agreement. I have not thought it worth while to trouble the Court with observations on that, because, really, the great questions in the case are those which I have tried to present, and which my brothers have presented, and upon these observations and the authorities on the other question, we submit the cause.